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ONTARIO ARCHAEOLOGICAL SOCIETY
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January 1999

99-1

The April 8th meeting features Dr. John Triggs. He will talk on the **Archaeology of Dundurn Castle!**

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As always, our meeting will be held at 8 pm at the London Museum of Archaeology, 1600 Attawandaron Road, near the corner of Wonderland & Fanshawe Park Road, in the northwest part of the city.

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Individual................	$18.00
Student....................	$15.00
Institutional............	$21.00
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EXECUTIVE REPORT

A motion was made and duly passed at the March meeting to cancel the May meetings because of poor attendance. From now on we will meet from September to April, except for December which is the annual Christmas party. If anyone has any suggestions for future speakers please let us know.

SOCIAL REPORT

On a positive note, members night for March was extremely well-attended with over 50 people showing up such that we had a shortage of chairs. A fun time was had by all!

Mike Spence reported on a ritual chamber including golden eagle remains, caged jaguars, large obsidian figurines, etc. found in a chamber under the Moon Pyramid (one of the largest pyramids in the New World) at the major site of Teotihuacan in the Valley of Mexico. Jim Keron spoke of Paleo-Indian fluted point sites he has found southeast of London. Shari Prowse talked about the stratified Middle Woodland site at the Bluewater Bridge South site. And finally, Chris Ellis described some aspects of the just completed final report he did with Brian Deller on the Early Paleo-Indian site near Parkhill, Ontario.

EDITORS' REPORT

The KEWA editors, as always, are looking for budding writers and fully budded ones, for that matter. We were lucky with this double mailing to have two long time contributors to the pages of KEWA. If it were not for the stalwarts like Chris Ellis, Paul Lennox and the author of this issue, Jim Wilson, we might no longer have a publication. Students or avocational archaeologists wishing to publish their first time articles are most welcome to submit.

As mentioned above, this month's KEWA is by Jim Wilson, of Archaeologix Incorporated. This article documents results of a research oriented excavation of an Early Woodland component in the Thames River valley at Delaware. The excavations offer a rare insight into Early Woodland houses.

The Pocock Site: Exploring the Early Woodland/Middle Woodland Transition in Southwestern Ontario

Jim Wilson

INTRODUCTION

I detail herein the results of the 1992 and 1993 investigations at the Pocock site, a small multi-component Early to Late Woodland occupation situated just north of the present day community of Delaware, Ontario. The Pocock site was discovered during the spring of 1992 and test excavations were conducted for a period of one week in June of that year (Wilson 1993). Based on the results of these excavations we returned in May of 1993 for a further nine weeks. During both field seasons the excavations were generously funded by the Ontario Heritage Foundation.

This article is the next to last in my series of contributions to KEWA regarding reductions in residential mobility during the Early and Middle Woodland periods in the Thames River valley of southwestern Ontario. This site-specific report is the last generated from my graduate research, and it will be followed in the near future by a synthetic overview, including the regional survey data. The overall project results, important enough in that they add to our understanding of the local culture history, can then be employed as a case study to help evaluate the explanatory strength of several competing hypotheses concerning the emergence of pre-agricultural reductions in residential mobility.

The limited goal of this presentation is to provide several new lines of evidence in support of the contention that the Early Woodland/Middle Woodland transition in southwestern Ontario was marked by a shift in settlement and subsistence behaviour; a shift involving a significant reduction in residential mobility. A successful demonstration that this transformation actually occurred is an essential first step before it can be asked why it happened. Data from the Pocock site, or for that matter any single site, are insufficient to support such a hypothesis on their own. Such a demonstration requires multiple lines of evidence drawn from a number of sites within a geographically circumscribed area and with a sufficient degree of temporal depth. As such, this article constitutes another addition to the database for the middle Thames area that can be drawn upon in the final contribution to this series.

SITE SIZE, LOCATION AND ENVIRONMENT

The Pocock site is situated on the western edge of a sandy terrace, 2.5 metres above the Thames River flood plain. While the site is located well away from the modern course of the Thames, during the periods of its occupancy it was situated at the confluence of the Thames and Dingman Creek, the relic channels of which are easily recognizable silt filled depressions located along the south and west margins of the site respectively (Figure 1). Wood charcoal collected from feature contexts includes in descending order of importance, hickory, sugar maple, white elm, red oak, beech, ironwood, ash, sycamore, and pine (Fecteau 1994:40). Based on the charcoal sample Fecteau suggests that the site was situated in a mature, mixed xeric forest, with the array of taxa indicating access to micro-environments associated with both upland and flood plain habitats.

The surface scatter extends for 85 metres north/south and at least 50 metres east/west; although the site continues for an unknown distance in the east under a grass lane (Figure 1). The densest distribution of surface material was noted on a slight sandy rise on the southern end of the site, immediately adjacent to the relic confluence of the Thames and Dingman Creek.

On the basis of the surface data it was decided to test the site by excavating a small trench at the southern end of the scatter. Over five days during June of 1992 a total of 25 one metre squares were excavated, with all soil screened through 1/4 inch screen (Wilson 1993). During the 1993 field season the excavation area was expanded, and in total 153 one-metre squares were examined.

SETTLEMENT PATTERN

Twelve cultural features relating to three distinct periods of occupation were identified at the Pocock site. Six of these features relate to a Meadowood occupation, three to a Middle Woodland component, and three to an Early Late Woodland component. There are also three small house structures, two of which can be confidently assigned to the Early Woodland occupation.

House Structures

House 1 is a small rectangular structure oriented east/west, which measures 4.6 metres long and 3.4 metres wide (Figure 2). Feature 12, which contained two large pieces of Vinette 1 ceramics, is located within House 1 along the north wall. In total, thirty-three posts define the perimeter of the structure with two internal posts located one-metre east of Feature 12.

House 2 is located two metres north of House 1 and is similarly oriented, although slightly smaller in size, measuring only 4.0 metres long and 3.4 metres wide. Like House 1, there is also a small offset pit feature containing Vinette 1 ceramics. In total twenty-four posts form the outline of House 2 and there is one centrally located interior post.

There is also a possibility that House 1 and 2 may comprise the north and south ends of a larger structure, which would measure approximately 4.25 metres wide by 8.5 metres long. Given the lack of comparative Early Woodland structures in southern Ontario and adjacent regions, it is difficult to assess which is the best interpretation.

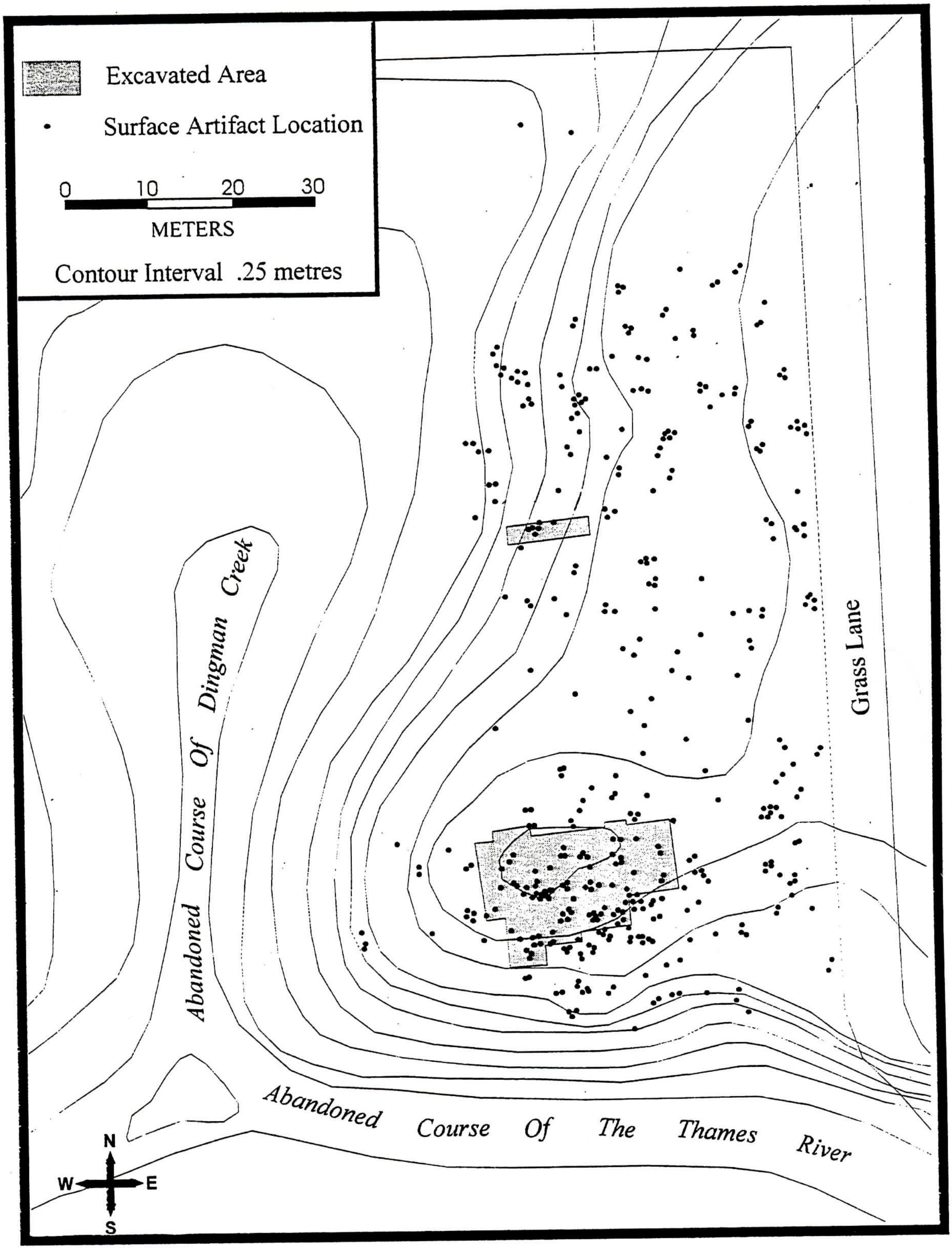
Excavated Area
Surface Artifact Location
0
10
20
30
METERS
Contour Interval .25 metres
Abandoned Course Of Dingman Creek
Abandoned Course Of The Thames River
Grass Lane
N
W
E
S

Figure 1. Pocock Site Surface Map

A possible third structure is centrally located in the eastern half of the excavation area (Figure 2). The post outline for this structure is far more ephemeral than the other two structures, although it appears to have been roughly square with slightly rounded corners and sides measuring approximately 5.5 metres. No interior features were identified, and it cannot be confidently assigned to one of the three periods of occupation.

Early Woodland Features (1, 2, 9, 10, 12 and 14)

Feature 1 is almost perfectly circular in plan view, measuring 132 cm across and extending 68 cm below the subsoil/plough zone interface. This pit was subject to at least two periods of utilization. At its base there is a thin organically rich band of soil almost entirely trapped beneath lighter sandy soils deposited due to wall collapse. Immediately above these lighter soils, and in actual contact with the lower level in the centre of the pit, is a second thin organically rich band. After this second level was deposited, it appears the pit was abandoned, gradually filling in with dark brown topsoil and small pieces of assorted occupational debris.

Ninety-six pieces of fire cracked rock were noted scattered throughout the upper level of the pit, however only one piece was found in the lower organically rich levels which contained numerous ceramic and nut shell fragments described below. A sample of 15 grams of the walnut shell collected in definite association with the Early Woodland ceramics at the base of Feature 1 was submitted for radiocarbon dating, returning a date of 2390 +/-50 B.P. (uncorrected).

Feature 2, located immediately southwest of Feature 1, is irregularly shaped in both plan view and profile and may be a refuse filled tree fall rather than a deliberately dug pit. It extended 35 cm below the subsoil/plough zone interface at its deepest point, and its fill consisted of near-black soil similar to that noted at the base of Feature 1. In addition, 18 grams of highly fragmentary interior/exterior cord marked ceramics and 16 pieces of fire cracked rock were collected.

Feature 9 is another large Early Woodland pit measuring 85 centimetres in width at its orifice and extended 75 centimetres below the plough zone/subsoil interface. Circular in plan view, this pit was slightly bell shaped in profile, measuring 101 centimetres in width at its base. At the bottom of the pit we encountered a thin (<1 cm) residue of organically rich soil. Charred floral remains in conjunction with small fragments of Vinette 1 ceramics were recovered from this level. In total there were 31 ceramic fragments which weighed a combined 59.7 grams. Three of the more complete ceramic specimens were clearly cord marked on both surfaces. In addition, one small amorphous lump of grey, semi-fired clay was recovered from the pit fill (Munsell Hue 10YR 7/1), as well as 29 pieces of chipping detritus and 136 micro flakes.

Feature 10 is a circular basin shaped pit which was nearly devoid of cultural materials. This pit measured 69 centimetres in diameter and extended 30 centimetres below the plough zone/subsoil interface. Contents included one small piece of fire-cracked rock, three pieces of chipping detritus, 14 microflakes and six small fragments of ceramics. These six ceramic fragments came from a single larger, silver dollar sized piece of Vinette 1 that disintegrated upon excavation.

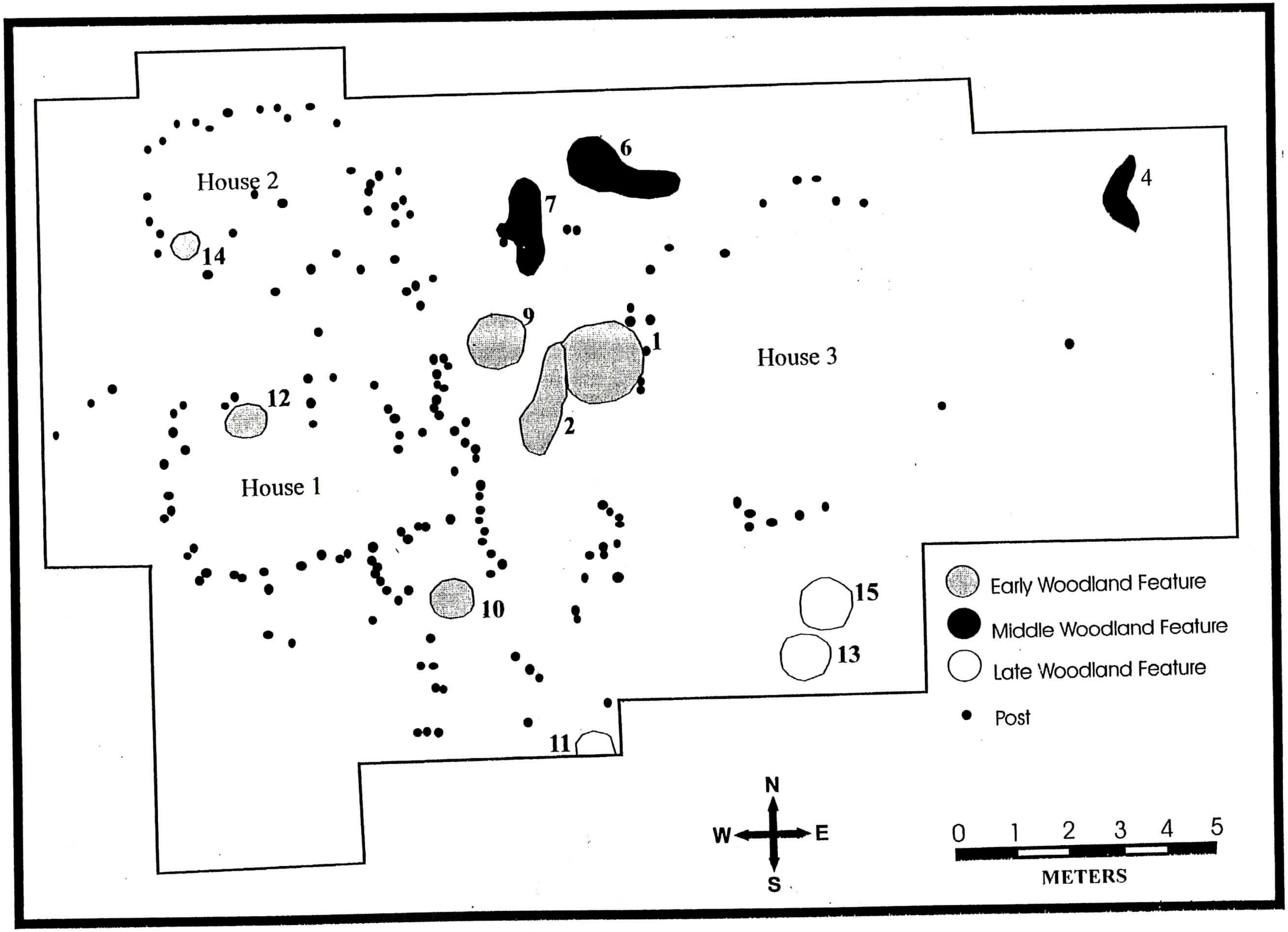

Figure 2. Pocock Site Settlement Patterns

Feature 12 is a small circular basin shaped pit that measured 71 centimetres in diameter and was 20 centimetres deep. This pit was located in House 1. It was choked with 43 large pieces of fire cracked rock and eight pieces (301 grams) of untempered, partially fired clay (Munsell Hue 10 YR 7/1). In addition, Feature 12 contained two large pieces of interior/exterior cord marked ceramics along with 15 smaller ceramic fragments, three pieces of lithic detritus, 14 microflakes, and two small pieces of calcined bone.

Feature 14 is a small circular basin shaped pit measuring 50 centimetres in diameter and extending 20 cm below the plough zone/subsoil interface. This feature was located within House 2. Unlike Feature 12, this pit contained no fire cracked rock and only two heat altered pieces of lithic detritus along with six micro flakes. One small quarter sized fragment of Vinette 1 ceramics was noted during excavation, however it did not survive lab processing.

Middle Woodland Features (3, 6 and 7)

Only three features were located containing Middle Woodland diagnostics, all of which were irregular in plan view and profile, and appear to be refuse filled depressions, rather than purposefully dug pits. Feature 3, which is located in the extreme northeast corner of the excavation area measured 13 centimetres in depth and was 121 cm wide. Feature 3 also contained two pieces of chipping detritus, eight microflakes, one Middle Woodland sherd, nine sherd fragments and forty-two small pieces of calcined bone.

Feature 6 is located along the northern margin of the excavations, close to the primary area of Early Woodland activity. At its deepest point this feature measured 35 centimetres below the plough zone/subsoil interface and was 212 centimetres wide. Feature 6 contained eight microflakes, twenty fragments of calcined faunal material and eighteen small Middle Woodland ceramic fragments.

Feature 7 is located immediately to the west of Feature 6. Feature 7 contained 18 very small pieces of Middle Woodland ceramics, 47 fragments of calcined mammal bone, nine pieces of chipping detritus, 47 microflakes and one Middle Woodland projectile point manufactured from Kettle Point chert (Figure 4:15).

Early Late Woodland Features (13 and 15)

Two Early Late Woodland features were documented along the southern margin of the excavation area. Both Feature 13 and Feature 15 are circular in plan view and have "teacup and saucer" shaped profiles. Profiles of this type are created when wall collapse deposits a layer of fill over basal pit contents, as was the case with Feature 1.

Feature 13 measured 101 cm in diameter and is 43 centimetres deep. Contents include 27 pieces of chipping detritus, 36 microflakes, six analzable sherds, 86 small sherd fragments, 60 fragments of

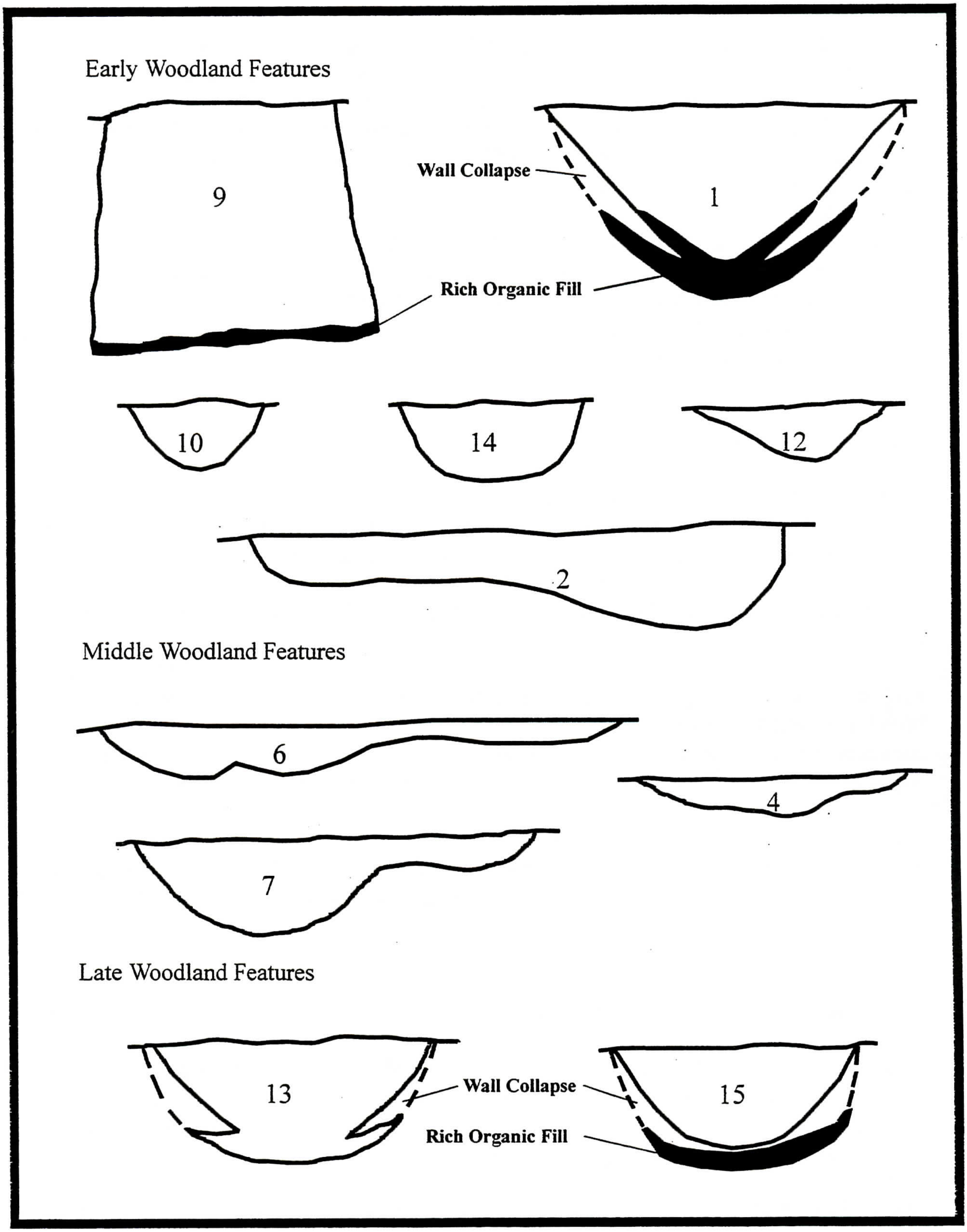

Figure 3. Pocock Site Feature Profiles

calcined bone as well as six maize seed and embryo fragments. These materials were recovered evenly from pit fill both above and below the wall collapse soil. Feature 15 measured 90 centimetres in diameter and extended for 42 cm below the plough zone/subsoil interface. This feature contained 28 pieces of chipping detritus, seven analyzable sherds, 94 sherd fragments, 37 fragments of calcined bone as well as 22 maize cob, seed and cupule fragments.

Unassigned Feature

Feature 11 was encountered late in the field season and was only partially exposed. It is basin shaped in profile and measures 64 centimetres in width and 40 centimetres deep. This pit produced eight very small ceramic fragments, none of which could be assigned a temporal provenience. This feature also contained seven pieces of chipping detritus, 26 microflakes, seven fragments of calcined bone (muskrat and grey squirrel), 1.58 grams of charred walnut shell, as well as two small cob fragments. On the basis of the charred cob fragments, Feature 11 likely relates to the Early Late Woodland component at the site.

LITHICS

From both the surface investigation and excavations, we recovered eighteen utilized flakes, three bipolar cores, twelve biface tips, three biface mid sections, three fragments of biface lateral margins, six crudely made bifaces apparently rejected in manufacture along with two more refined bifaces, eight end scrapers, two side scrapers, thirteen projectile points, four drills, one hafted end scraper, two scrapers manufactured on broken point tips, and one Meadowood cache blade base along with three other Meadowood base fragments. Table 1 presents the metric and non-metric data for the chipped lithic tools, along with figure references where applicable.

Table 1. Pocock Site Chipped Lithic Tool Metric and Non-Metric Data

Cat.#	Length	Blade Width	Thickness	Stem Width	Notch Width	Material	Comment	Figure
3	52.9	25.2	7.8	18.2	14.1	Onondaga	M.W. Projectile	4:14
7	43.4	29.8	9.4	29.8	22.9	Selkirk	M.W. Projectile	4:13
92	31.2	22.7	7.2	22.7	15.4	Onondaga	M.W. Projectile	4:16
838	35.1	24.3	8.2	22.3	18.5	Kettle Point	M.W. Projectile	4:15
541	*	22.9	17.9	13.7	NA	Kettle Point	E.W. Projectile?	4:12
140	*	24.9	6.8	*	20.4	Unknown	E.W. Projectile?	4:05
2	*	20.9	5	*	*	Kettle Point	Projectile/Wedge	4:06
5	*	20.8	6.8	20.8	15	Onondaga	Meadowood Drill	4:08

Cat.#	Length	Blade Width	Thickness	Stem Width	Notch Width	Material	Comment	Figure
8	*	25.4	5.8	NA	NA	Onondaga	Meadowood Cache Bl.	4:04
99	18.2	22.2	4.6	*	14.2	Onondaga	Meadowood Scraper	4:11
1	21.6	18.2	5.4	N.A	NA	Onondaga	E. L. W. Projectile	4:17
142	30.6	*	5.9	NA	NA	Unidentified	E. L. W. Projectile	4:18
672	25.5	19.8	4.7	22.2	15.9	Onondaga	E. L. W. Projectile	4:20
601	*	17.2	3.6	*	14.2	Onondaga	E .L. W. Projectile	4:19
650	42.6	*	5.6	18.1	11.2	Onondaga	Meadowood Projectile	4:03
752	*	19.7	4.9	23.2	14.5	Onondaga	Meadowood Projectile	4:02
560	*	13.5	4.2	22.3	15.4	Onondaga	Meadowood Drill	4:07
600	32.9	14.1	5.8	18.3	14.3	Onondaga	Meadowood Drill	4:09
532	*	*	5.6	*	*	Onondaga	Meadowood Drill	4:10
533	*	22.1	5	22.1	14	Onondaga	Meadowood Projectile	4:01
619	*	*	*	20.2	13.9	Onondaga	Meadowood Base	NA
501	*	*	*	*	*	Onondaga	Meadowood Base	NA
804	*	*	*	20.1	*	Onondaga	Meadowood Base	NA
113	*	*	*	*	*	Onondaga	Meadowood Tip	NA
513	*	*	*	*	*	Onondaga	Meadowood Tip	NA
762	*	*	*	*	*	Onondaga	Meadowood Tip	NA
121	*	*	*	*	*	Onondaga	Meadowood Tip	NA
590	*	*	*	*	*	Onondaga	Meadowood Tip	NA
563	*	*	*	*	*	Onondaga	Meadowood Drill Tip	NA
532	*	*	*	*	*	Onondaga	Meadowood Drill Tip	NA
150	*	*	*	*	*	Onondaga	Meadowood Biface Frag.	NA
59	-	-	21.8	NA	NA	Kettle Point	Bifacial Preform	NA
147	61.2	51	17.4	NA	NA	Onondaga	Bifacial Preform	NA
78	55.4	20.5	10.4	NA	NA	Onondaga	Biface/Knife	4:24
614	*	33	11.6	NA	NA	Onondaga	Bifacial Preform	4:21
591	63.9	42.9	20.7	NA	NA	Onondaga	Bifacial Preform	NA
535	*	26.1	10.1	NA	NA	Heated	Bifacial Preform	NA
828	44.9	34.5	5.8	NA	NA	Onondaga	Bifacial Preform	4:25
500	46.9	34.7	19.2	NA	NA	Onondaga	Bifacial Preform	NA

Cat.#	Length	Blade Width	Thickness	Stem Width	Notch Width	Material	Comment	Figure
130	*	*	17.9	NA	NA	Kettle Point	Biface Fragment	NA
137	*	*	*	*	*	Kettle Point	Biface Fragment	NA
584	*	*	*	*	*	Kettle Point	Biface Fragment	NA
609	*	*	*	*	*	Heated	Biface Fragment	NA
148	*	*	*	*	*	Heated	Biface Fragment	NA
24	*	*	*	*	*	Onondaga	Biface Tip	NA
130	*	*	*	*	*	Flint Ridge	Biface Tip	NA
89	41.2	18.3	10.8	NA	NA	Kettle Point	Side Scraper	NA
606	47.8	28.9	11.7	NA	NA	Kettle Point	Side Scraper	NA
688	25.2	30.2	6.2	NA	NA	Onondaga	End Scraper	NA
151	32.7	21.1	8.4	NA	NA	Onondaga	End Scraper	NA
582	19.5	13.1	5.1	NA	NA	Onondaga	End Scraper	NA
152	22.8	15.1	3.9	NA	NA	Onondaga	End Scraper	NA
736	*	15.1	14.8	NA	NA	Kettle Point	End Scraper	NA
126	23.1	19.6	5.3	NA	NA	Kettle Point	End Scraper	NA
97	*	19.6	9.2	NA	NA	Kettle Point	End Scraper	NA
541	31.2	12.2	10.1	NA	NA	Kettle Point	Bipolar Core	NA
515	25.8	18	12.2	NA	NA	Kettle Point	Bipolar Core	NA
695	30.7	13.4	8.6	NA	NA	Kettle Point	Bipolar Core	NA

Early Woodland Lithics

There are sixteen examples of Meadowood chipped lithic tools in the assemblage; including three projectiles, one projectile base reworked into an end-scraper, four hafted drills, a cache blade base, two tips reworked into scrapers and three base fragments from side-notched tools. In addition there are five thin biface tips, two drill tips and two thin biface mid-sections, all manufactured from Onondaga chert, which almost certainly relate to the Meadowood component.

All but one projectile, one tip scraper and two of the biface tips were manufactured from varieties of Onondaga chert, which in my experience are seldom found in the local Thames River gravels. This preference for non-local Onondaga materials has been previously noted with regard to Early Woodland sites in the middle Thames area by Ellis et al. (1988:15). However it now appears that this was not an exclusive preference, as some Meadowood tools were being manufactured from local materials. As will be also demonstrated below, local Thames River gravel Onondaga chert as well as non-local Kettle Point chert predominate in the detritus collected from the Early Woodland features. It is not surprising that at least some local material was being utilized by the Meadowood inhabitants of the site, in that there is a gravel bar located on the extreme southwest corner of the occupation in which cobbles of secondary source Onondaga chert are easily located. Later Middle Woodland groups actively exploited these local chert sources as well (Wilson 1990:60-61).

There is also a thin side-notched projectile lacking both basal ears manufactured from local Onondaga chert which may relate to the Early Woodland component (Figure 4:12). Similarly, a straight-stemmed point manufactured from Kettle Point chert may relate to the Meadowood Phase occupation of the site. Straight-stemmed points are infrequently encountered on Meadowood sites in New York State (Granger 1978), although they appear to predominate in the late part of the Early Woodland period in southwestern Ontario (Parker 1997).

Middle Woodland Lithics

There are four examples of Middle Woodland projectiles, three of which were collected from the surface of the site well north of the excavation areas, while the fourth was excavated from Feature 7. Two of the points are characterized by wide side-notch openings which tend towards an expanded U form (Figure 4:13 and 16). The lower notch margins are not clearly defined and extend almost down to the basal ears, giving the points an expanded stem appearance. Both of these projectiles were manufactured from local Onondaga chert, and have been heavily resharpened. Projectiles similar to these were the most common form at the Boresma site (Wilson 1990, see Plate 7:1-20 and Plate 8:1-15). The third Middle Woodland projectile was manufactured from a high quality variety of Onondaga chert (Figure 4:14). It has what I have termed an excurvate expanding-stemmed hafting element, a form present, but much less common, at the Boresma site (Wilson 1990, Plate 9:9-15). The projectile excavated from Feature 7 also has an excurvate expanding-stemmed hafting element, but was manufactured from Kettle Point chert (Figure 4:15).

Early Late Woodland Lithics

Two small Levanna-like triangular projectile points were recovered from the southern end of the site, one from the excavation area and one from the surface (Figure 4:17-18). Two small triangular side-notched projectiles which resemble Raccoon points were also recovered during the excavation (Figure 4:19-20). While the early portion of the Early Late Woodland sequence is poorly understood in this part of southwestern Ontario, it is likely that these projectiles are contemporaneous with the Early Late Woodland such as the Riviere Aux Vase-like ceramics (see below) recovered from Features 13 and 15. Similar projectiles have been located on the surface at another site, located 300 metres to the northwest, along the same abandoned channel of the Thames River (Wilson 1997).

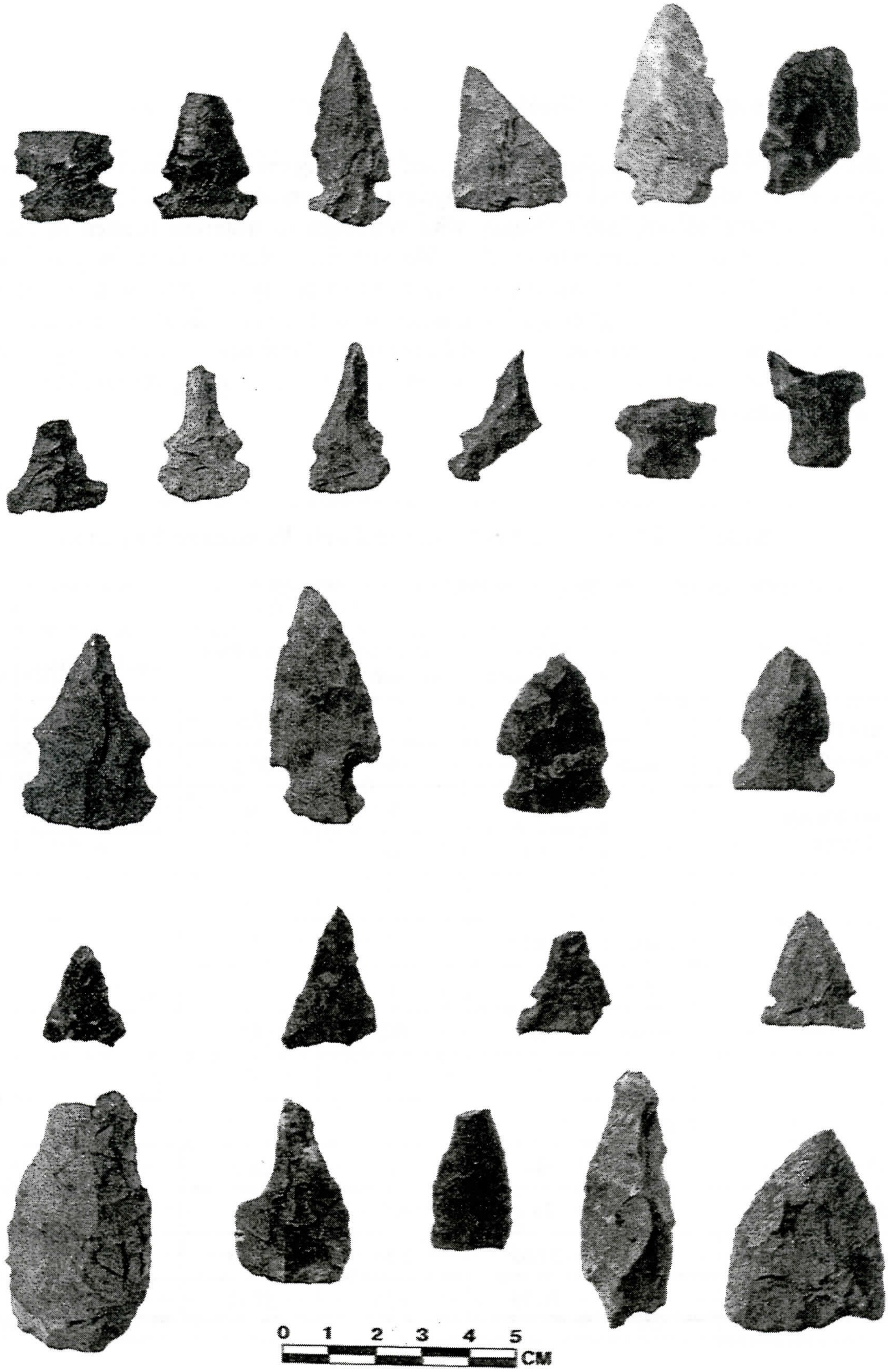

Figure 4. Chipped Lithics

Detritus Morphology and Chert Source

The lithic detritus from the pit features was analyzed following the classification system described by Lennox et al. (1986). The results of the analysis are presented in Tables 2, 3, and 4. All chert identifications were accomplished visually with reference to materials located in the MCzCR collections in London and with additional cobble materials collected from the gravels along the southern end of the Pocock site. An attempt was made to distinguish between local Thames River gravel Onondaga chert and higher quality primary source material from the Niagara Peninsula. However distinguishing between non-cortical flakes of local and non-local Onondaga is an inexact science, as small high quality cobbles indistinguishable from primary outcrop material can be collected locally upon occasion.

Table 2. Lithic Detritus from the Early Woodland Features

Flake Morphology		**Chert Type**				**Total**
		Local Onondaga	**Primary Onondaga**	**Kettle Point**	**Unidentifiable**	
Primary Flakes Without Cortex	f	9	0	2.5	9	20.5
	grams	6.9	0	27.2	11.6	45.7
Primary Flakes With Cortex	f	1	0	0	0	1
	grams	1.1	0	0	0	1.1
Secondary Flakes	f	7	0	11	0	18
	grams	3.1	0	9.7	0	12.8
Broken Flakes	f	7	1	15	9	32
	grams	3.8	0.2	4.2	1.9	10.1
Shatter	f	0	0	0	2	2
	grams	0	0	0	2	2
Total Frequency		24	1	28.5	20	73.5
Total Weight		14.9	0.2	41.1	15.5	71.7
% Frequency		32.65	1.36	38.78	27.21	100
% Weight		20.78	0.28	57.32	21.62	100

Table 3. Lithic Detritus from the Middle Woodland Features

Flake Morphology		Chert Type		
		Local Onondaga	Primary Onondaga	Kettle Point
Secondary Flakes	f	2	1	1
	grams	0.2	0.2	1.1
Broken Flakes	f	6	0	3
	grams	1	0	1.5
Total Frequency		8	1	4
Total Weight		1.2	0.2	2.6

Table 4. Lithic Detritus from the Early Late Woodland Features

Flake Morphology		Chert Type				Total
		Local Onondaga	Kettle Point	Flint Ridge	Unidentifiable	
Primary Flakes Without Cortex	f	18	3	0	0	21
	grams	18.8	5.6	0	0	24.4
Primary Flakes With Cortex	f	4	0	0	0	4
	grams	0.4	0	0	0	0.4
Secondary Flakes	f	9	1	1	2	13
	grams	1.9	0.7	0.2	1.2	4
Broken Flakes	f	25	0	0	0	25
	grams	8.2	0	0	0	8.2
Shatter	f	8	0	0	0	8
	grams	20.2	0	0	0	20.2
Total Frequency		64.0	4.0	1.0	2.0	71.0
Total Weight		49.5	6.3	0.2	1.2	57.2
% Frequency		90.1	5.6	1.4	2.8	100.0
% Weight		86.5	11.0	0.3	2.1	100.0

Ground Stone

The mid-section of a single, straight-sided ground stone object, rectangular in cross-section and manufactured from a fine grained, light green metamorphic material was recovered from the excavation area. It measured 36 mm in width and was 21 mm thick, and may well be part of a small adze or possibly even a whetstone.

CERAMICS

Early Woodland Ceramics

Four fragments of Early Woodland ceramics were collected from the site surface, all of which were located within one metre of each other, 40 metres north of the excavation area. All of these fragments have interior and exterior cord marking, although it is noticeably courser on the interior. Two of the sherds exhibit coil breaks and all appear to come from the same vessel. On average these sherds are 13 mm thick and are extremely friable and poorly fired.

The majority of the Early Woodland ceramics were recovered from the base of Feature 1 where the two lower levels come together in the center of the pit (Figure 3). Although no rim sherds were present, on the basis of sherd thickness it appears that there are at least two vessels represented. The first is a coil constructed Vinette 1-like interior/exterior cord marked container. There are no indications of lugs or flat sherds and hence flat bases as are commonly noted on Early Woodland vessels in Michigan and Ohio (Ozker 1982), and one presumes the Pocock vessel had a conoidal base. The remains of this vessel are extremely friable and poorly fired, although many are encrusted with a carbon based residue on their interior surface.

The sherds from the second Feature 1 vessel were interspersed among the remains of the first. They are much thinner and better fired, and have somewhat finer cord marking on both their interior and exterior surfaces. This vessel was also manufactured using the coiling technique, although in terms of paste and temper it is similar to a well-constructed Middle Woodland vessel. Ceramics meeting this description have been recovered from the nearby Neeb site (Spence and Fox 1986:19), and have been termed "Pinery Ware", after the area in which they were first documented by Kenyon (1980). Pinery Ware is considered to be a late variant of Vinette 1, transitional to the tool impressed ceramics associated with the Middle Woodland period (Spence, Pihl and Murphy 1990:137). This conclusion seems consistent with the date of 2350+/-50 B. P. from Feature 1, the latest date yet obtained for a Meadowood site in southwestern Ontario (see Spence, Pihl and Murphy 1990:126).

Excluding the very fragmentary sherds from Features 10 and 14, Feature 12 produced the only other large Vinette sherds. Two large interior/exterior corded sherds were excavated from this pit, each measuring 11.1 millimetres thick and are apparently part of the same vessel.

Middle Woodland Ceramics

Three pieces of Middle Woodland ceramics were recovered from the surface of the site, including one rocker dentate stamped sherd, one straight dentate stamped sherd, and one cord-marked sherd which exhibits a clear coil break. A further two pieces of Middle Woodland ceramics were encountered in the upper fill of Feature 1, five centimetres from its surface. One of these sherds is undecorated, while the second is decorated with straight dentate stamping. All five of these sherds are similar in both colour and temper size to the ceramics described from the nearby Boresma site (Wilson 1990).

Feature 3 contained a single quarter-sized pseudo-scallop shell impressed sherd along with nine smaller fragments of Middle Woodland ceramics. The pseudo-scallop shell decorated sherd measures 8.2 millimetres in width and shows a coil break on one margin. Feature 6 contained eighteen small fragments of Middle Woodland ceramics, three of which are clearly dentate stamped. All of the Feature 6 sherds were found in close proximity to each other, and appear to be parts of a single small vessel. Feature 7 also contained 18 very small pieces of ceramics, of which, one is clearly dentate stamped. No Middle Woodland rims or upper vessel fragments were recovered.

Early Late Woodland Ceramics

All of the Early Late Woodland ceramics were recovered from Features 13 and 15. Feature 13 contained three corded sherds, one cord-malleated sherd with deep cord-wrapped stick impressions and two smooth sherds with deep cord- wrapped stick impressions. Feature 15 contained three thin, cord marked sherds, two corded sherds with cord wrapped stick impressions and one corded sherd decorated with thin incised lines. While the Early Late Woodland ceramic recoveries were very fragmentary, they are consistent with other Riviere Aux Vase ceramics encountered in the middle Thames area.

FAUNAL REMAINS

Bone preservation at the Pocock site was poor, with the entire faunal assemblage consisting of only 276 fragments of calcined bone. However, Rosemary Prevec's analysis of the assemblage resulted in the production of a good deal of useful data that helps to highlight the differences between the occupations at the site.

The Early Woodland faunal assemblage consists primarily of small mammals such as grey squirrel and raccoon, along with one element each from the whitefish and sunfish families (Table 5). Prevec (1994) suggests that the majority of the unidentified mammal elements are from a large species, probably deer. It is interesting to note that the fish species identified are present in the river year round and are not spring spawners.

Table 5. Early Woodland Faunal Identifications

Feature #	Species	Element	f	Comments
1	Mammal (Mammalia sp.)	Unknown	3	calcined
9	Grey Squirrel (*Sciurus carolinensis*)	Humerus	1	calcined
9	Raccoon (*Procyon zibethicus*)	Incisor	1	calcined
9	Frog (*Rana* sp.)	Illium	1	calcined
9	American Toad (*Bufo americanus*)	Illium	1	calcined
9	Frog/Toad (Anura sp.)	Tibiofibula; Femur	2	calcined
9	Whitefish (*Coregonus* sp.)	Vertebra	1	calcined
9	Sunfish (Centrarchidae sp.)	Pharyngeal	1	calcined
9	Mammal (Mammalia sp.)	Unknown	8	calcined
9	Class Uncertain	Unknown	11	calcined
12	Class Uncertain	Unknown	2	calcined
14	Class Uncertain	Unknown	1	calcined
Totals			37	

Table 6. Middle Woodland Faunal Identifications

Feat.#	Species	Element	f	Comments
3	White-tailed Deer (*Odocoileus virginianus*)	Proximal Phalanx	1	calcined
3	White-tailed Deer (*Odocoileus virginianus*)	Phalanx	1	calcined
3	Mammal Sp.	Unknown	40	calcined
6	White-tailed Deer (*Odocoileus virginianus*)	Distal Phalanx	1	calcined
6	White-tailed Deer (*Odocoileus virginianus*)	Phalanx	1	calcined
6	Mammal Sp.	Unknown	18	calcined
7	White-tailed Deer (*Odocoileus virginianus*)	Proximal Phalanx	1	calcined
7	White-tailed Deer (*Odocoileus virginianus*)	Sesamoid	1	calcined
7	Mammal Sp.	Unknown	75	calcined
Totals			139	

The Middle Woodland sample is somewhat larger, with 139 elements, however the only species represented is white-tailed deer (Table 6). The Early Late Woodland faunal assemblage consists of 97 elements, however none were identifiable to species (Table 7). Prevec suggests that much of the unidentified mammal bone is from a large species and is probably deer.

Table 7. Early Late Woodland Faunal Identifications

Feature #	Species	Element	f	Comments
13	Mammal Sp.	Unknown	20	calcined
13	Class Uncertain	Unknown	40	calcined
15	Mammal Sp.	Unknown	6	calcined
15	Class Uncertain	Unknown	31	calcined
Totals			97	

FLORAL REMAINS

The floral remains recovered from the floatation of the feature fill were identified by Rodolphe Fecteau (Fecteau 1994).

Nut Remains

The nut remains were extremely fragmented, making identification beyond the species level difficult in some instances. Among the identified remains, black walnut predominates, representing 85.5% by weight of all nut remains. Smaller quantities of butternut, oak, hickory and hazelnut also occur. Table 8 provides a breakdown of the nut recoveries by time period and feature.

Seed Remains

Seed remains from the Pocock site were sparse. A total of 31 seeds, representing five identifiable taxa were recovered. The majority of the seeds, including raspberry, bedstraw, goosefoot, grape and purslane, are common in disturbed habitats such as human occupation sites and stream banks. Native groups in the Great Lakes area are known to have utilized all of these plants (Yarnell 1964). Table 9 provides a summary of the seed recoveries by time period and feature.

Table 8. Pocock Site Nut Remains

Feature #	Walnut	Butternut	Oak	Hickory	Hazelnut	Juglans sp.	Total
Early Woodland							
1	22.9			0.17			23.07
2	4.42						4.42
9	3.42						3.42
10	1.75					0.11	1.86
14			0.01			0.01	0.02
Subtotal	*32.49*		*0.01*	*0.17*		*0.12*	*32.79*
Middle Woodland							
6	0.24	0.05					0.29
7	0.45		0.04				0.49
Subtotal	*0.69*	*0.05*	*0.04*				*0.78*
Late Woodland							
13	0.92			0.05			0.97
15	3.16	0.60	0.01	1.14	0.02	0.55	5.48
Subtotal	*4.08*	*0.60*	*0.01*	*1.19*	*0.02*	*0.55*	*6.45*

Cultigen Remains

Thirty-one maize fragments, weighing a total of one gram, were recovered during the excavations. All of the maize with the exception of a single cupule from Middle Woodland Feature 7, came from the Early Late Woodland features (11, 13 and 15). The recoveries include cob fragments, seed fragments, cupules, and a single embryo. There is a strong possibility that the cupule in Feature 7 resulted from the subsequent Early Late Woodland occupation, for which there is clear and convincing use of maize. Therefore it does not provide exceptionally strong evidence for "early maize" use during the Middle Woodland period.

INTERPRETING THE POCOCK SITE

In these conclusions I focus on the significance of the Meadowood and Middle Woodland components of the site, especially as they relate to patterns of residential mobility. A more detailed discussion of the Early Late Woodland materials from the Pocock site and the middle Thames River drainage is forthcoming.

Table 9. Seed Remains

Feature #	Raspberry	Grape	Bedstraw	Chenopodium	Purslane	Unknown	Total
Early Woodland							
1	2			1	3	1	7
Subtotal	*2*			*1*	*3*	*1*	*7*
Middle Woodland							
3	1						1
6						1	1
7	5					1	6
Subtotal	***6***					***2***	***8***
Late Woodland							
15	8	1	1	1		2	13
Subtotal	*8*	*1*	*1*	*1*		*2*	*13*

Although our excavations were limited to 153 square metres, the Pocock site provides a valuable window into the nature of Early Woodland and Middle Woodland adaptations along the middle Thames. The Neeb site is the only other excavated Early Woodland site in the immediate area, and this material has only been partially reported (Spence and Fox 1986:19-20). Moreover, the 2350+/-50 B.P. date from Pocock Feature 1 is the first such Early Woodland radiocarbon assay for the entire Thames drainage.

Elsewhere I have suggested that the Middle Woodland occupations of the extreme southern portion of the province were substantially more sedentary than previously represented (Wilson 1990, 1993). Recent additions to the literature are extremely useful in articulating what the archaeological expectations of mobile and sedentary settlement patterns should be (e.g. Steponaitis 1987; Stafford 1994, Andrefsky 1994; Kuhn 1994). Steponaitis takes as her point of departure Binford's (1980) model placing mobility patterns of pre-agricultural peoples along a continuum from "foraging" to "collecting". Foragers are characterized by a great deal of residential movement and little storage capacity. They move across the landscape in response to the depletion of local resources. In contrast, collectors are more logistically oriented, making fewer residential moves, sending out specialized task groups to seek specific items with which they return to the residential camp.

Binford suggests that "forager" groups should produce two general site types, "residential bases" and "locations" (1980:9). Residential sites will vary in size and density of artifacts depending on the length of occupation, group size and the frequency of reoccupation, however assemblages should include evidence of tool manufacturing, repair, food preparation, and perhaps limited ceremonial or recreational activities (Thomas 1983:76-77). Locations will be much harder to identify archaeologically because of the transitory nature of their use. Binford (1980:9) suggests "few if any tools may be expected to remain at such places".

In contrast to foragers, collectors often establish small special purpose camps, occupied either over night or for short periods of time adjacent to specific resource areas. Bulk goods are obtained at these locations and the transported back to residential base camps. Binford expects that logistically organized collectors will produce sites ranging from: 1) near undetectable "stations", used for information gathering; 2) "caches", where bulk raw materials may be stored; 3) "field camps" used for actual resource procurement, which may have both specialized assemblages and limited amounts of domestic refuse generated by the task groups living there, and 5) residential bases, evidencing a wide range of both production and consumption related artifacts.

Binford's (1980) "foragers" and "collectors" represent idealized strategies, and it should not be expected that individual cases will fall cleanly into either category. Rather, as Steponaitis (1987:20) states, "they define a dimension along which the direction of change in settlement pattern can be monitored". This framework is useful for approaching the Early and Middle Woodland archaeological record of the middle Thames River area where it is rapidly becoming apparent that the Middle Woodland adaptive strategy was a great deal more logistically organized than during the proceeding Early Woodland period. Of particular importance to any convincing demonstration of this settlement/subsistence shift at the beginning of the Middle Woodland period revolves around a need to know if small Early and Middle Woodland sites better approximate generalized residences, or if they functioned as special purpose logistic camps. As such, the Pocock site provides a wonderful opportunity to contrast the differential utilization of one location by the Early and Middle Woodland peoples of the middle Thames area.

The Early Woodland assemblage from the Pocock site provides numerous clues regarding function and seasonality. The walnut shell from the Early Woodland features was highly fragmentary, suggesting deliberate crushing in order to aid the recovery of nut oil by boiling. As Garland et al. (1990:199) point out, "the removal of nut meats from the shell is not facilitated by wholesale smashing of nuts". This evidence argues against the possibility that the nuts were stored for later consumption of their meat. Ozker (1982:77) has suggested that the large thick-walled, Early Woodland vessels may have played a crucial role in nut oil processing, and the recovery of both nut fragments and ceramics in direct association in three of the Early Woodland features seems consistent with her assessment. However, as Spence and Fox (1986:39) have noted, Early Woodland ceramics were not recovered at the Morpeth South site, although 96 grams of highly fragmentary hickory and black walnut shell were collected from one feature, and lesser amounts of nut shell were noted in two other pits (see Spence and Fox 1986:19). Spence and Fox (1986:39) also argue that the recovery of Vinette 1 and Pinery Ware ceramics from sites located within the limits of the Canadian Biotic Province where "nut-bearing trees are rare to nonexistent", is also problematic if it is to be maintained that Early Woodland ceramics were used exclusively for nut oil processing.

Garland et al. (1990:199-200), have also suggested that ceramics were not essential for the processing of nut oil, as they have identified significant quantities of highly fragmentary nut remains from preceramic contexts on sites located along the Lower St. Joseph River in Berrian County, Michigan. While this once again indicates the relationship between ceramic technology and nut oil processing may not have been as crucial as suggested by Ozker (1982), it still seems likely that ceramic technology could have significantly increased the efficiency of nut oil extraction, which may account for the often noted association of these early ceramics and nut shell fragments.

Features 1 and 9 are also useful in terms of interpreting the Early Woodland component. Similar large, deep features lacking evidence of in situ burning have so far only been located on Early Woodland sites interpreted as fall and/or winter occupations; including, Boyd Lakefront (Spence and Fox 1986:20-21), Dawson Creek (Jackson 1986), Scaccia (Funk 1973; Granger 1978), and Riverhaven #2 (Granger 1978). The presence of the small Early Woodland structures in association with these features is also consistent with a fall or perhaps cold weather occupation.

The Early Woodland faunal assemblage, while limited due to poor preservation, is also consistent with a generalized pattern of resource utilization that would be expected at a residential base. Both small and large mammals were being exploited, as well as fish species present in river on a year round basis rather than spring spawners such as pickerel or sucker.

The Early Woodland component at the Pocock site is differentiated from sites such as Scaccia and Riverhaven #2, interpreted by Granger as winter base camps, in that there is no evidence for dense midden deposits. While there are no middens, it could certainly be argued that because the sandy, well-drained soils at the Pocock site are not conducive to the preservation of faunal materials, some of the apparent differences in recovery rates between this site and Scaccia or Riverhaven #2 may be spurious. Similarly, that evidence for large-scale production of bifaces and the concomitant volume of lithic waste are not present at the Pocock site may have more to do with the site's location well away from the preferred primary outcrops of Onondaga chert than it does with an assessment of whether or not the Pocock site represents a winter base camp. It also appears that Scaccia and Riverhaven #2 were occupied off and on over a long period of time, which was not the case at the Pocock site.

Nevertheless, I believe it is unlikely that the Early Woodland component at the Pocock site is a "winter base camp", at least in the sense that Granger employs the term. The limited data now available suggest the occupation was primarily during the late summer and fall, and may possibly have extended into the winter months. It seems likely that given the Pocock site's strategic location at the confluence of the Thames and Dingman Creek, it may have been subject to brief periods of logistic utilization during other seasons as well.

The presence of the two small Early Woodland houses, each aligned in the same direction and with a single interior pit feature suggests that the site may have been occupied for only a single season by two small family groups. The presence of the two large storage features in close proximity to the structures is consistent with this interpretation, as is the limited but generalized artifact inventory which suggests the site was not repeatedly occupied over a long period of time. In terms of the forager/collector continuum, the Early Woodland occupation at the Pocock site best meets the expectations of a seasonal residential camp.

The Middle Woodland component at the Pocock site stands in clear contrast to the Early Woodland materials. The irregularly shaped Middle Woodland features were not purposefully dug, rather they are little more than shallow refuse filled depressions, with only trace amounts of nut and three raspberry seeds recovered from their fill.

Although the Middle Woodland faunal sample was larger than the Early Woodland sample, the only species represented is white-tailed deer. Similarly the collection of chipping detritus from these Middle Woodland features is dominated by tiny retouch flakes (N=63) while there were no primary flakes, only five small biface thinning flakes and seven broken flakes. This sample suggests that only tool maintenance and resharpening activities were taking place during the Middle Woodland occupation, not tool production.

On this basis it seems likely that the Middle Woodland occupation of the Pocock site was specifically oriented towards the exploitation of deer resources, rather than representing the remains from a generalized residential group. In terms of the forager/collector continuum, the Middle Woodland occupation appears to have been quite brief and logistically oriented. As such, the Pocock site can be added to a growing list of small Middle Woodland sites in the London area which were similarly organized (Wilson 1990, 1991b); including the Butler's Wood site (Timmins 1989), the Sibelius site located on the north bank of the Thames River only two kilometres southwest of the Pocock site (Fox 1982), the Pond Mills Cluster sites (Poulton 1985; Timmins 1989), the Kittmer site (Wilson 1991a) and the Beech Ridge site (Mayer, Pihl, Poulton 1989).

In the final contribution to this series of articles I will review the overall argument in support of my contention that there was a significant shift in settlement/subsistence patterns between the Early and Middle Woodland periods in southwestern Ontario. If this case can be convincingly made, it will be possible to move forward with an exploration of why this change occurred. To date, theorists interested in this problem have explained reductions in residential mobility with reference to four primary mechanisms; including, 1) climatic change, 2) resource abundance and/or diversity, 3) population increase and territorial circumscription, and 4) social processes such as alliance and exchange. The primary goal of the next contribution will be to evaluate the explanatory strength of these competing scenarios through an examination of their expected residual material correlates in relation to the data from the middle Thames River drainage.

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